## DRIVING THE MOBILITY OF TOMORROW



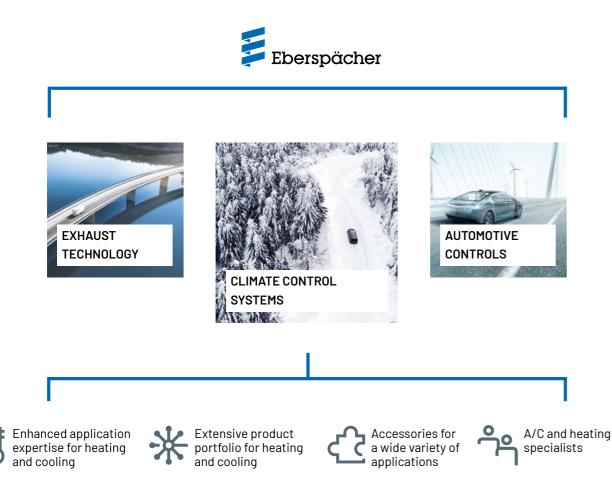


CLIMATE CONTROL SYSTEMS / PUBLIC SAFETY

## PERFECT THERMAL MANAGEMENT FOR PUBLIC SAFETY

Heating & Air Conditioning Solutions -Connected with Digital Services

## **EBERSPÄCHER GROUP**





# **EXPERTS IN COOLING AND** HEATING.

## **INNOVATIVE MARKET AND CUSTOMIZED** SOLUTIONS



## FOR SPECIAL VEHICLES

Heating, cooling and digital services - various solutions, one partner

Police, fire department, and rescue organization emergency vehicles are in use around the clock to preserve the safety and health of us all.

Optimum temperature conditions in emergency vehicles are essential to ensure that emergency personnel can perform to the best of their ability. Focused and effective operations are only possible if the temperature in the crew's area, the mobile operations center, or the rear area-for rescue dogs, for example-or, in some cases, for transported goods, can be controlled quickly and easily. This requires intelligent, robust, and durable products for optimum heating or air conditioning. Eberspächer is the perfect partner for this.

[Public Safety]











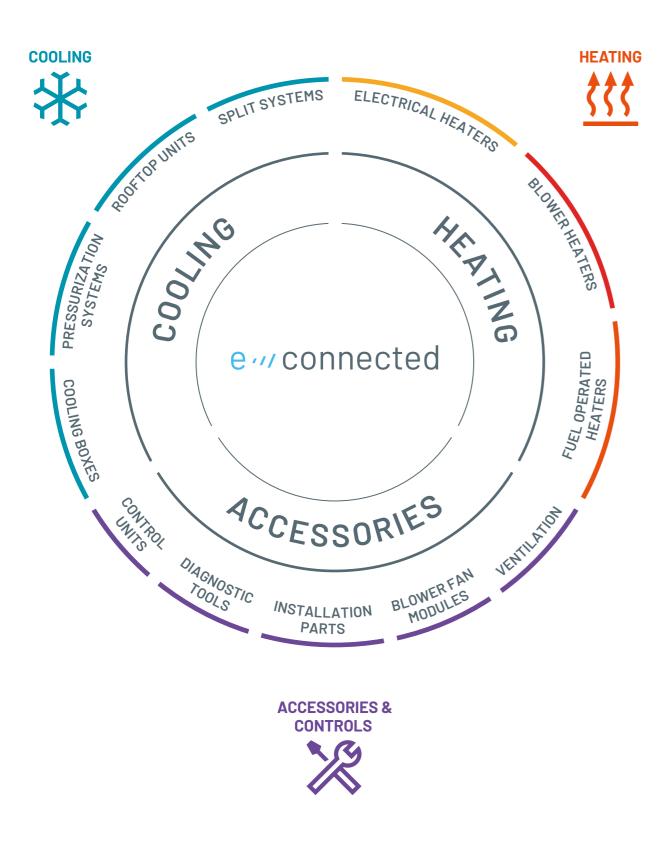




3

## OUR PRODUCT PORTFOLIO

## PRODUCTS FOR PUBLIC SAFETY VEHICLES





## FUEL OPERATED HEATING SOLUTIONS

## **FUEL OPERATED AIR HEATERS**

### AIRTRONIC S3/M3/L3



- Fast and reliable heating of the patient area
- Brushless motor ensures a long lifetime of 5,000 hrs
- Low energy consumption ideal for pre-heating or heating when the engine is off
- Suitable for EN1789 approval

Fuel		Gasoline		Diesel		
Version	[12 V]	S3 Commercial B2L	M3 Commercial B4L	S3 Commercial D2L	M3 Commercial D4L	L3 Commercial D6L
Heating performance	kW	1.0 – 2.0	1.3 - 4.0	0.85 - 2.2	1.05 - 4.0	1.5 - 6.0
Fuel consumption	l/h	0.14 - 0.26	0.17 - 0.55	0.1-0.27	0.1-0.49	0.16 - 0.74
Weight	kg	2.5	4.5	2.5	4.4	6.8
Main dimensions* Ixwx	h mm	310 x 115 x 122	376 x 140 x 150	310 x 115 x 122	376 x 140 x 150	438 x 160 x 170
Interfaces				CAN/ LIN/ S+		

\* Air heater connection diameter ø 75 mm

### **AIRTRONIC 2 ETHANOL**



• Fast and reliable heat for electric vehicles

interior

- No impact on the vehicle's electric range • Low-emission heating of the vehicle
- Constant, individually adjustable temperature
  - Flexible installation in the interior, trunk or underfloor

Fuel		Ethanol
Version	[12 V]	S2 Commercial E2L
Heating performance	kW	0.9 - 2.2
Fuel consumption	l/h	0.16 - 0.49
Weight	kg	2.7
Main dimensions* Ixwx	h mm	310 x 115 x 122
Interfaces		CAN/LIN/ S+

\* Heating air connection diameter ø 75 mm

## FUEL OPERATED WATER HEATER

### **HYDRONIC S3**



- Preheating of the engine coolant and the vehicle interior when connected to an Eberspächer heat exchanger
- Long service life of 5,000 hrs and fewer spare parts due to robust components

Fuel		Gaso	oline	Diesel		
Version	[12 V]	S3 Economy B4E	S3 Economy B5E	S3 Economy D4E	S3 Economy D5E	
Heating performance	kW	1.8 - 4.3	1.8 - 5.0	1.3 - 4.3	1.3 - 5.0	
Fuel consumption	l/h	0.57	0.67	0.53	0.59	
Weight	kg	2.0				
Main dimensions* Ixwx	h mm	215 x 91 x 124				
Interfaces		CAN/S+ or CAN/LIN				

\* With straight connection fittings

- Cost savings and less downtime for end customers thanks to low fuel and energy consumption
- Heater operation integrated in the vehicle's control panel and integration in the vehicle's own diagnostics possible

## **BLOWER HEATER SOLUTIONS**

### WATER BLOWER HEATER



- Ideal auxiliary heater for the patient compartment
- Can be combined with a Hydronic water heater for use when the engine is off
- Large portfolio of different sizes and power levels to fit every kind of public safety vehicle
- Complete system including hoses, control units and air diffusion available

Version	[12 V]	Alizé 2 HV	Compact EV01	Compact EV02	Silencio 2 HV	Super K HV	Kool 2 HV	Falkon HV
Heating performance	kW	3.4	4.3	5.2	5.5	7.6	10	14.8
Airflow	m³/h	220	230	350	250	500	520	725
Electrical consumption	n W	70	70	100	16	100	180	360
Main dimensions   x w x	h mm	189 x 175 x 132	114 x 255 x 189	114 x 279 x 106	152 x 321 x 125.5	216 x 368 x 130	261 x 384 x 158	296 x 430 x 167

## ELECTRICAL BLOWER HEATER



- Fast and reliable heating solution for the patient compartment
- Heater is equipped with secured PTC element and safety thermal switch
- Large portfolio of different sizes and power levels to fit every kind of public safety vehicle
- Complete system including control units and air diffusion systems available

Version	[12 V]	Alizé 2 EHV	Silencelek EHV	Kelec EV01	Kelec EV02	Kool 2 EHV	Falkon EHV
Heating performance	kW	up to 2.2	up to 0.5	up to 1.7	up to 2.2	up to 4	up to 6
Airflow	m³/h	210	95	230	350	520	411
Electrical consumption	ר W	from 18 to 33	510	from 11 to 74	from 7 to 74	depends on version	depends on version
Operating voltage rang	e VDC	48 - 120	-	24 - 80	24 - 300	48 - 750	48 - 800
Operating voltage rang	e VAC	230 - 480					
Main dimensions   x w x	h mm	189 x 175 x 132	210 x 80 x 156	114 x 255 x 114	196 x 273 x 114	261 x 384 x 158	297 x 432 x 167



## **ELECTRICAL HEATING SOLUTIONS**

## **ELECTRICAL WATER HEATER 230 V - PLUGTRONIC**



- Quick coolant circuit heating for a pre-heated engine
- Also available with a 230-V air heater
- Ideal temperature in the patient area when the vehicle leaves for an intervention
- Several installation positions possible
- Environmentally friendly heating solution for parked vehicles
- No fossil fuels, zero emissions
- One-handed, easy power cable plug-in

## HIGH VOLTAGE COOLANT HEATER - TITRONIC

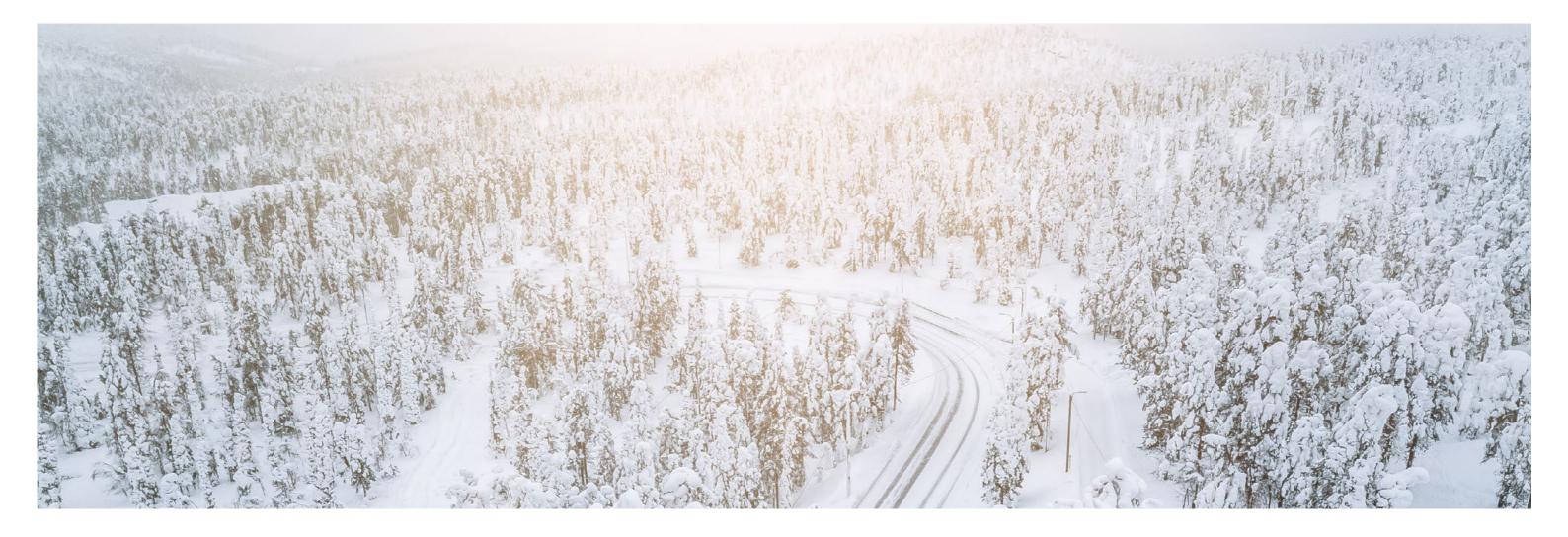


- Powerful and reliable PTC technology offers high heating performance
- Precise and convenient heating of the patient area

Version	800	1,850
Heating performance kW	0.8	1.85
Operating voltage range VAC (HV)	230	
Weight ko	0.8	
Main dimensions I x w x h mm	nsions I x w x h mm 151 x 131 x 81	
Interfaces V DO	12 / 24	

Version		CHHV 50 G3
Heating performance	kW	5.0*
Operating voltage range (HV)	V	250 - 450 / 12
Weight	kg	2.0
Main dimensions $ xwxh $	mm	160 x 159 x 105
Interfaces		LIN 2.1

\* UN = 350 V, TCO = 60 °C, QCO = 10 L/MIN, COOLANT = 50:50



- Battery conditioning extends battery life, shortens charging times and increases range
- Designed with high-voltage expertise for OEM installations

## SPLIT SYSTEMS

## HORIZONTAL EVAPORATORS FOR SPLIT SYSTEMS

- Powerful evaporators provide climate control for the emergency personnel area
- Available as A/C only (VAC), HVAC or EHVAC version for electric public safety vehicles
- Range of adapter sets available to extend original HVAC systems of main LCVs on the market
- Suitable for EN1789 approval

- Large portfolio of different sizes and power levels available to fit every kind of public safety vehicles
- Complete system including hoses, control units and air diffusion systems available
- Can be combined with the Power K Reverse external condenser unit, which also includes an electric compressor and drier filter



## VAC UNITS FOR BOTH FUEL OPERATED AND ELECTRIC PUBLIC SAFETY VEHICLES



Version	[12 V]	Super K VAC	Kool 2 VAC*	Falkon VAC**	HK EV04 VAC*
Cooling performance	kW	up to 4	5.7	9	10.7
Airflow	m³/h	440	520	660	1,300
Electrical consumption	n W	100	180	360	190
Main dimensions   x w x	h mm	216 x 368 x 137	261 x 384 x 158	297 x 432 x 167	780 x 334 x 120

\* Available in FAI version with air diffusion and control unit included. \*\* Available in FA version with air diffusion included.

## HVAC UNITS FOR FUEL OPERATED PUBLIC SAFETY VEHICLES



Version	[12V]	Super K HVAC	Kool 2 HVAC*	Falkon HVAC**	HK EVO4 HVAC*
Cooling performance	kW	3.5	4.5	7.7	8.6
Heating performance	kW	4.3	6.6	10	9.5
Airflow	m³/h	440	520	660	1,300
Electrical consumption	W	100	180	360	190
Main dimensions   x w x h	n mm	216 x 368 x 137	261 x 384 x 158	297 x 432 x 167	780 x 334 x 120

\* Available in FAI version with air diffusion and control unit included. \*\* Available in FA version with air diffusion included.

## EHVAC UNITS FOR ELECTRIC PUBLIC SAFETY VEHICLES



Version	[12V]	Super K EHVAC	Kool 2 EHVAC	Falkon EHVAC
Cooling performance	kW	3.5	4.5	7.7
Heating performance	kW	up to 4	up to 4	up to 5
Airflow	m³/h	440	520	660
Electrical consumption	n W	100	180	360
Operating voltage rang	Operating voltage range V DC		24 - 750	
Operating voltage rang	e VAC	230 - 480		
Main dimensions   x w x	h mm	216 x 368 x 137	261 x 384 x 158	297 x 432 x 167

 $\mathsf{EHVACs}$  are also available in a hybrid version: evaporator +  $\mathsf{PTC}$  heater + water heater.

## VERTICAL EVAPORATORS FOR SPLIT SYSTEMS

## VAC, HVAC AND EHVAC UNITS



Version	[12 V]	VK9 HVAC	VK9 HVAC FAI*	VK9 EHVAC
Cooling performance	kW	8	6.5	6.5
Heating performance	kW	10	7.5	3
Airflow	m³/h	670	520	670
Electrical consumption	n W	300		
Main dimensions   x w x	h mm	174 x 414 x 335		

\*FAI version with air diffusion and control unit included.

## **ROOFTOP EVAPORATORS FOR SPLIT SYSTEMS**

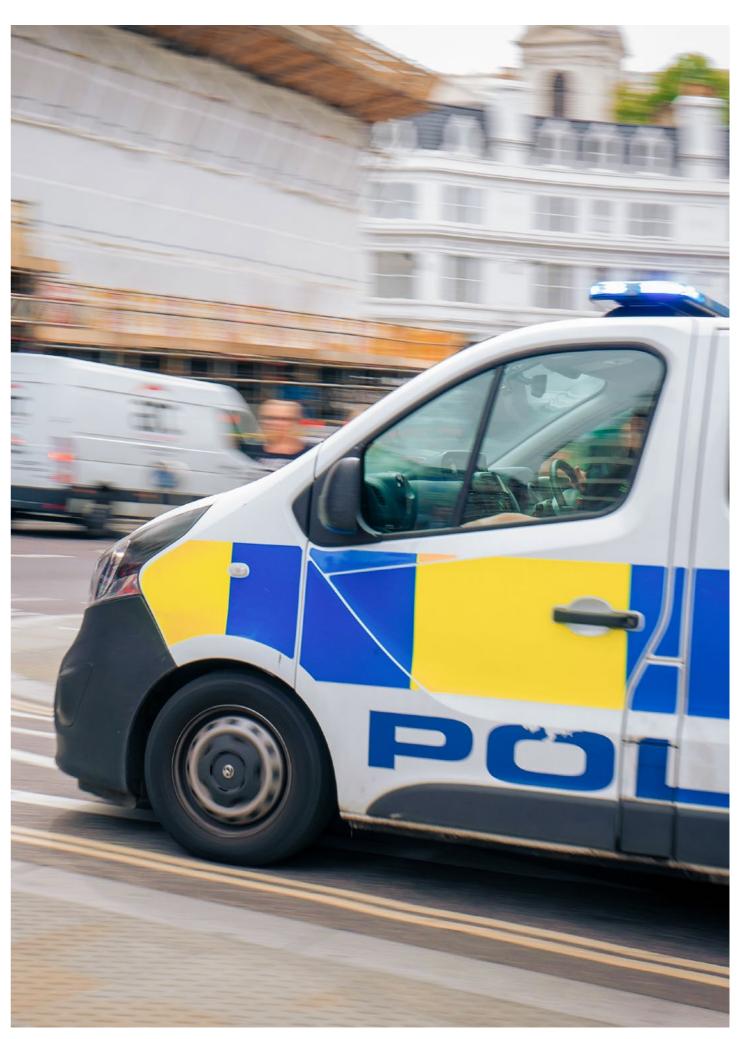
- Powerful rooftop evaporator system
- Air diffusion with integrated control unit available
- Saves space in the vehicle
- Suitable for EN1789 approval

- Can be combined with the Power K Reverse external condenser unit, which also includes an electric compressor and drier filter
- Available as A/C only (VAC) or HVAC

## VAC AND HVAC UNITS



Version	[12V]	Klimatop VAC	Klimatop HVAC	
Cooling performance	kW	5.5	5	
Heating performance	kW	-	6	
Airflow	m³/h	595	560	
Electrical consumption	W	150		
Main dimensions   x w x h	n mm	125 x 445 x 580		



## **ROOFTOP SYSTEMS**

- Compact system, includes evaporator, condenser and drier filter
- Can be connected to a standard compressor
- Especially suitable for air conditioning in the passenger compartment
- Available as A/C only (VAC), HVAC or EHVAC version for electric public safety vehicles



## VAC AND HVAC SYSTEMS



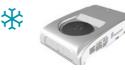
Version	[12V]	RK12 VAC	RK12 HVAC
Cooling performance	kW	11.5	11.5
Heating performance	kW	-	15
Airflow	m³/h	950	
Weight	kg	50	
Main dimensions   x w x	h mm	1,090 x 9	940 x 179

### EHVAC SYSTEM



Version	[12 V]	RK12 EHVAC CPF
Cooling performance	e kW	up to 11
Heating performanc	e kW	up to 14
Airflow	m³/h	up to 1,380
Weight	kg	84.5
Main dimensions I x v	wxh mm	1,504 x 890 x 250

### **ROOFTOP A/C UNIT - RK9**



- Also available for battery electric vehicles using a PTC heating element
- Can integrate an electric compressor (SH version)

Version		RK9
Cooling performance	kW	up to 9
Heating performance	e kW	up to 10
Airflow	m³/h	725
Weight	kg*	23
Main dimensions   x w	xh mm	932 x 581 x 192

\*Depending on version.

• Also available as air conditionning only version

## **ACCESSORIES AND CONTROLS**

### BUILT-IN CONTROL UNIT FOR FUEL OPERATED HEATERS - EASYSTART PRO



- Intuitive timer setup
- Easy to use even while wearing work gloves
- Operation of two heaters with only one control unit possible
- Integrated temperature sensor makes installation very simple and reduces costs
- Quick servicing thanks to rapid troubleshooting

### **REMOTE CONTROL UNIT FOR FUEL OPERATED HEATERS - EASYSTART WEB**



- State-of-the-art technology for operating multiple heaters with one account
- Central operation of heaters by fleet manager
- Responds to most common communication protocols such as CAN, LIN or S+
- Integrated antenna for time-saving installation in all vehicles
- Compatible with other operating devices (EasyStart Pro)
- Intuitive, user friendly app for iOS and Android

### BUILT-IN CONTROL UNIT FOR FUEL OPERATED HEATERS AND A/C SYSTEM - PCK3 FOH



- system and Hydronic or Airtronic • Simple and fast operation
- Robust, reliable and easily integrated

Intuitive control of air conditioning

- Stepless heating performance control
- Easy to use even while wearing work gloves

### **ROOF VENTILATOR**



- Very flat roof ventilators
- Different designs and air outlets

### **ADAPTER SET**



- Enables an additional evaporation connected to the original A/C system
- · Simple and low-cost solution

### ADAPTER SETS ARE AVAILABLE FOR THE FOLLOWING VEHICLE MODELS, AMONG OTHERS:

Vehicle models					
Citroën Jumpy	Mercedes Benz Sprinter	MAN TGE	Nissan Navara	Renault Master	Volkswagen Crafter
Ford Transit Custom	Mercedes Benz Vito	lveco Daily	Peugeot Boxer	Renault Trafic	Volkswagen T6

### **AIR OUTLETS**



- Huge range of outlets with different • Durable elements, made of high-quality designs, functionalities and installation plastic options • Simple and easy to install • Developed in house, designed for
- modern dashboards

### **DIAGNOSTIC TOOL - EASYSCAN**



- Failure analysis of devices and components
- Comprehensive evaluation of current operating status
- Error code display including additional system parameters
- Easy optimization of control units such as EasyStart Pro or EasyStart Web including firmware updates

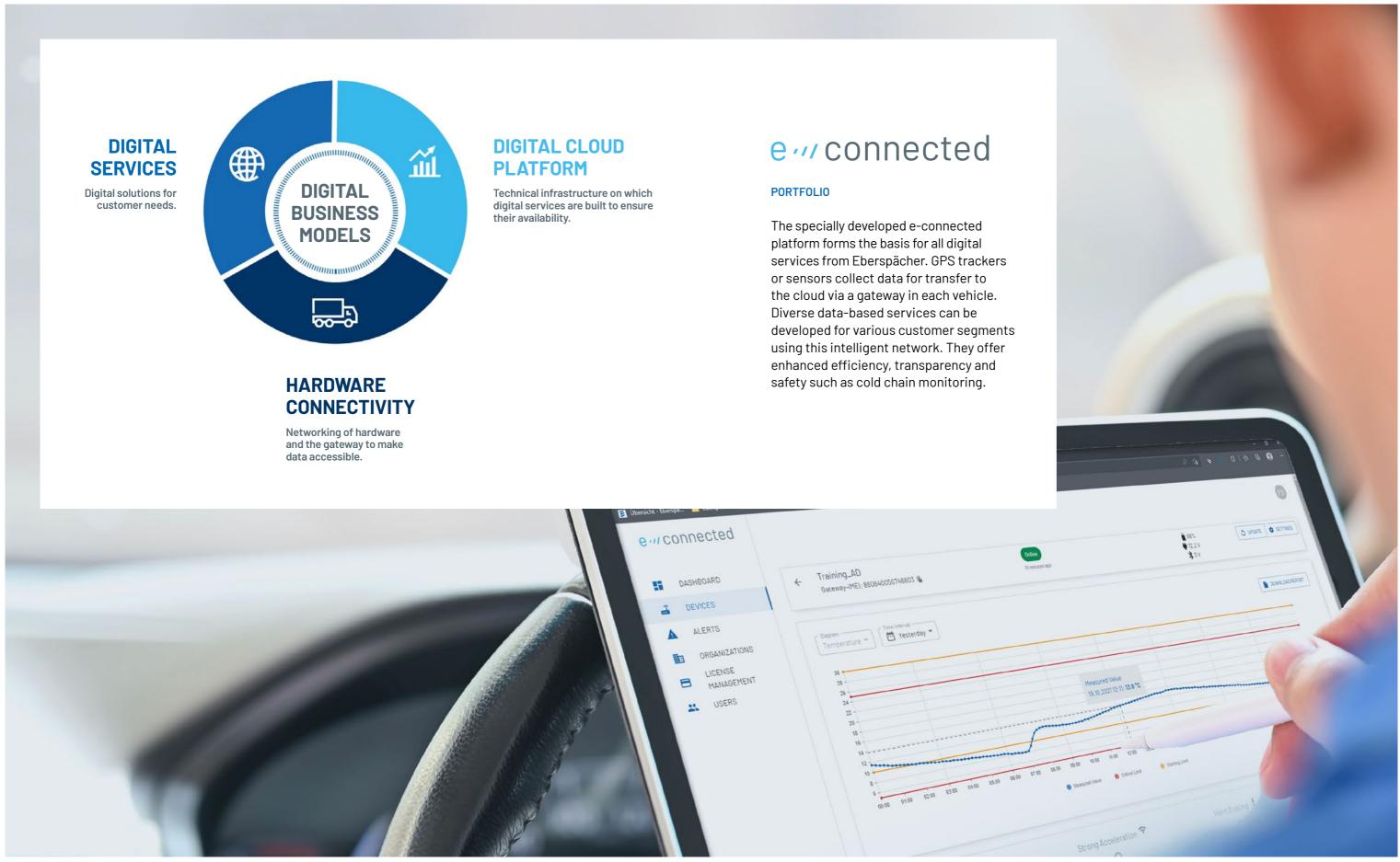
	٠	Electric and non-electric versions
s available	•	Easy-to-fit roof adapter and air channel option
ator to be	٠	Designed for every brand of vehicle

Fast installation

19

## **E-CONNECTED**





## **GLOBAL FOOTPRINT**



BRANCHES Esslingen, germany



EBERSPÄCHER CLIMATE CONTROL SYSTEMS GMBH EBERSPÄCHERSTRASSE 24 73730 ESSLINGEN / GERMANY

PHONE: +49 711 939-00 FAX: +49 711 939-0634 info@eberspaecher.com www.eberspaecher-climate.com